

## **ABSTRACT**

A gas engine electric power generating system in which an electric power generating apparatus including an electric power generator connected with a gas engine of a pilot fuel oil ignition type is installed near a coal mine. Recovered methane gas and ventilated methane gas from the mine are introduced into a cylinder of the gas engine while being adjusted to be introduced as a lean methane/air mixture to operate the engine to produce electric power. A carbon dioxide emission credit reflecting the difference in greenhouse effect index between releasing coal mine methane gas to the atmosphere and releasing the methane gas to the atmosphere as carbon dioxide, is registered on an emission credit market. Also included are the affiliated systems of mutual patronage relation constituted by one or a plurality of the systems and nearby power generating system or systems using coal bed methane or pre-mining gas as fuel.